

19. The detector of claim 18, wherein said transparent medium comprises an air gap.

20. A detector for detecting touches by conductive objects making capacitive contact with a transparent sensor located over a display screen, the detector comprising:

a patterned arrangement of sensing conductors extending into said sensor,

a source of oscillating electrical energy at a predetermined frequency, and

detection circuitry for detecting a capacitive influence on said at least one sensing conductor when said oscillating electrical energy is applied.

21. The detector of claim 20, wherein said detection circuitry comprises a differential detector arrangement associated with said sensing conductors for detecting differences between outputs of said conductors.

22. The detector of claim 20, wherein said source of oscillating electrical energy is configured to transmit said energy into said conductive object, and said sensing circuitry is configured for sensing a signal at said at least one sensing conductive element induced by a touch of a conductive object subjected to said transmitted oscillated signal.

23. The detector of claim 20, configured to interpret a property of a signal detected at said at least one conductor in terms of a number of touching conductive objects.

24. The detector of claim 20, wherein there is provided at least a second conductor located within said sensor and having a junction with said at least one conductor, wherein said source of oscillating electrical energy is applied to one of said conductors and said junction is configured such that a touch by a conductive object causes an a.c short at said junction, said detector being configured to detect the oscillating signal at said second conductor as said capacitive effect and to infer said touch.

25. The detector of claim 24, wherein said detection circuitry is configured to interpret a property of a detected signal as a number of touches of a corresponding conductor.

26. The detector of claim 24, comprising a matrix of first sensors aligned in a first direction and second sensors aligned in a second direction with a plurality of junctions in between, and further comprising a tabulation of leakage capacitance values for each junction, said detector being configured to use said leakage capacitance values to correct readings at each conductor.

27. The detector of claim 20, wherein said source of oscillating electrical energy is connected to oscillate at least one of said detector, part of said detector and said at least one conductor with respect to a reference voltage level, thereby to permit a capacitive current flow between said conductive object and said at least one conductor.

28. The detector of claim 27, wherein said source of oscillating energy is connected to oscillate a first part of said detector, and wherein said first part is connected to a second part not subject to oscillations via a communication connection unaffected by the potential difference between said first and said second parts of the detector.

29. The detector of claim 28, wherein said communication connection comprises at least one differential amplifier.

30. The detector of claim 20, wherein said sensor is configured with a transparent medium between itself and said display screen.

31. The detector of claim 30, wherein said transparent medium comprises an air gap.

32. The detector of claim 20, wherein said sensor comprises a grid of conductors arranged within a layer thereof.

33. The detector of claim 32, wherein said conductors are connected pairwise to amplifiers.

34. The detector of claim 33, wherein said amplifiers are differential amplifiers each having a positive input and a negative input and wherein one conductor of said pair is connected to said positive input and a second conductor of said pair is connected to said negative input.

35. The detector of claim 27, further comprising a compensation table for providing a compensation value at each conductor to compensate for static noise.

36. The detector of claim 35, configured to update said compensation table upon system startup.

37. The detector of claim 35, configured to use an ambiguous object detection as a trigger to refresh said compensation table.

38. The detector of claim 37, wherein any combination of number, phase and position data from detected signals are used to define ambiguity in object detection.

39. A method of touch sensing at a matrix of sensing conductors located in a transparent sensor over an electronic display screen, comprising:

providing an oscillating signal at a predetermined frequency, and measuring said conductors for capacitive effects on said conductors due to touch thereon.

40. The method of claim 39, comprising providing said oscillating signal to an external transmitter to energize a touching body part.

41. The method of claim 39, wherein said matrix comprises first conductors aligned in a first direction and second conductors aligned in a second direction, the method comprising providing said oscillating signal to said first conductors and sensing said oscillating signal at any of said second conductors to which said signal has been passed by a capacitive link caused by a touching conductive object.

42. The method of claim 39, comprising providing said oscillating signal to at least said conductors such that a conductive touching body drains current from a respective conductor.

43. The method of claim 42, comprising using said oscillating signal to oscillate a detection mechanism comprising said conductors wherein said oscillated detection mechanism is simultaneously isolated from common ground.

44. The method of claim 42, comprising:

using said oscillating signal to oscillate a first part of a detection mechanism, said first part comprising said conductors,

isolating said first part from a second part, and

using said isolated second part to communicate touch detection outputs to external devices.

45. A method of manufacture of a touch detector for an electronic display screen, comprising:

providing an oscillation signal source,

embedding a grid of transparent conductors within at least one transparent foil,

placing said transparent foil over said electronic display screen, and

providing detection circuitry for detecting capacitive effects on said conductors.